

Please delete the present Abstract of the Disclosure.

Please add the following new Abstract of the Disclosure:

A method of producing a gas sensor is provided. The method includes a disposition step of preparing an elastic seal member having a main body portion and a smaller diameter portion that is smaller in outer diameter than the main body portion, disposing the entire main body portion and a part of the smaller diameter portion inside a tubular metallic member and allowing a remaining part of the smaller diameter portion to protrude outward from a rear end of the tubular metallic member, and a crimping step of crimping at least a portion of the tubular metallic member radially inward and thereby compressively deforming the elastic seal member.

A gas sensor is also provided.~~The present invention provides a gas sensor that can prevent damage of a lead wire and a crack of an elastic seal member even when the elastic seal member is thermally expanded. The gas sensor is formed by using an elastic seal member having a smaller diameter portion and a main body portion positioned at the more front end side than the smaller diameter portion and larger in outer diameter than the smaller diameter portion. The elastic seal member is configured so that the entire main body portion and a front end side of the smaller diameter portion are disposed inside an outer tubular member and an outer circumferential surface of the smaller diameter portion (cylindrical section) is disposed astride the rear end of the outer tubular member when observed with respect to the axial direction of the gas sensor. Between the outer circumferential surface of the smaller diameter portion and the rear end of the outer tubular member is formed a space S. In the meantime, it is preferable from a point of view of preventing damage of the lead wire more effectively that the axial distance~~

Preliminary Amendment

Appln. No.: National Stage of PCT/JP2005/000031

~~between the rear end of the elastic seal member and the rear end peripheral edge of the smaller diameter portion is 0.6 mm or more.~~